

Serial No.: 10/723,031
Amtd. dated 05 December 2006
Reply to Office Action of 05 July 2006

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Amendments to the Claims:

This listing will replace all previous listings and versions of the claims in the application:

Listing of claims:

1. (Currently amended) A dental instrument comprising:

(a) a hollow shank having, a rearward fitting, and a forward head including a contact region and a window in proximity thereto;

(b) said contact region being adapted for cutting, scraping, and/or grinding dental tissue;

(c) a source of laser energy in the low infrared spectrum approximately from 600 nm to 1100 nm, wherein the source is configured and arranged to produce laser energy for photodamage or photothermal effect to destroy residual bacteria;

(d) said window being transmissive with respect to said laser energy; and

(e) a fiber optic bundle extending from said source of laser energy, through said fitting and said shank for communication with said window; wherein said dental instrument is configured and arranged to enable enabling a dental professional to subject a surgical site simultaneously to (1) cutting, scraping and/or grinding, and to (2) said laser energy for photodamage or photothermal effect ~~trimming and cauterizing to remove diseased tissue and to~~ destroy residual bacteria.

2. (Previously presented) The dental instrument of claim 1, wherein said contact region is a sickle scaler for removing supragingival plaque and calculus, said sickle scaler having a flat surface with two cutting edges that converge at a cutting tip.

3. (Previously presented) The dental instrument of claim 1, wherein said contact region is a curette for subgingival scaling, root planing, and soft tissue debridement, said curette

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having cutting edges that are set at approximately a 90 degree angle with respect to the axis of the shank.

4. (Previously presented) The dental instrument of claim 1, wherein said contact region is a hoe scaler to aid in calculus and diseased cementum removal.

5. (Previously presented) The dental instrument of claim 1, wherein said contact region is a chisel scaler to aid in calculus and diseased cementum removal.

6. (Previously presented) The dental instrument of claim 1, wherein said contact region is a file scaler to aid in calculus and diseased cementum removal.

7. (Canceled)

8. (Previously presented) The dental instrument of claim 1, wherein said laser energy is produced by at least one solid state diode laser in the approximate vicinities of 870nm and 930nm.

9. (Currently amended) A dental process for applying a dental instrument to a surgical site, the dental instrument including ~~comprising~~:

(a) a hollow shank having, a rearward fitting, and a forward head including a contact region and a window in proximity thereto;

(b) said contact region being adapted for cutting, scraping, and/or grinding dental tissue;

(c) a source of laser energy, wherein the source is configured and arranged to produce laser energy for photodamage or photothermal effect to destroy residual bacteria;

(d) said window being transmissive with respect to said laser energy; and

(e) a fiber optic bundle extending from said source of laser energy, through said fitting and said shank for communication with said window;

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said dental process comprising: including the steps of subjecting the surgical site simultaneously to

(1) mechanical cutting, scraping and/or grinding, and to

(2) said laser energy for photodamage or photothermal effect trimming and cauterization, to remove diseased tissue and to destroy residual bacteria; said laser energy being produced by at least one solid state diode laser in the low infrared spectrum approximating 600nm and 1100nm.

10. (Currently amended) A process for performing dental surgery with an instrument, wherein the instrument includes comprising:

(a) a hollow shank having, a rearward fitting, and a forward head including a contact region and a window in proximity thereto;

(b) said contact region being adapted for cutting, scraping, and/or grinding dental tissue;

(c) a source of laser energy, wherein the source is configured and arranged to produce laser energy for photodamage or photothermal effect to destroy residual bacteria;

(d) said window being transmissive with respect to said laser energy; and

(e) a fiber optic bundle extending from said source of laser energy, through said fitting and said shank for communication with said window;

said dental process comprising including the steps of applying said instrument to subject a surgical site simultaneously to

(1) mechanical cutting, scraping and/or grinding, and to

(2) said laser energy for photodamage or photothermal effect trimming and cauterization, to remove diseased tissue and to destroy residual bacteria; wherein said laser energy being is

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generated by at least [[a]] one diode laser configured and arranged to produce an output including
in the approximate range of 870nm and or 930 nm or both.

11. (New) The process of claim 9, further comprising trimming and cauterizing to remove diseased tissue and to destroy

12. (New) The process of claim 10, further comprising trimming and cauterizing to remove diseased tissue and to destroy residual bacteria.